

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Clint J. BISHARD	
Application No.: 10/087,132	Group Art Unit: 2616
Filed: March 1, 2002	Examiner: Levitan, D.
Attorney Docket: RIC00010	
Client Docket: 09710_1329	

For: QUEUING CLOSED LOOP CONGESTION MECHANISM

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Commissioner for Patents  
Alexandria, VA 22313-1450

Dear Sir:

Applicant respectfully requests a pre-appeal brief review be made of the present application for at least the following clear errors.

**I. EXECUTIVE SUMMARY**

The claimed invention is directed to the management and reduction of congestion in packet or data networks and/or packet switches. A packet network or packet switch is in a congested state when the total bandwidth of the packets entering the output queues of a packet switch at an egress port becomes greater than the bandwidth available at the egress port. In order to deal with such congestion, the claimed invention employs a queuing closed loop congestion mechanism that provides the capability for packet networks to efficiently and effectively manage data congestion while still providing the desired levels or classes of services and allowing a more optimal network oversubscription. According to one aspect of the invention, the queuing

congestion mechanism includes a discard policy that is enabled for one or more of the queues and that is based on the loading of the capacity of one of the other queues. This aspect forms part of each of the instant claims. For example, independent claim 1 recites, “wherein a discard policy is enabled for the third queue based on the loading of the capacity of the second queue.”

## II. ISSUE

Whether claims 1-20 are obvious under 35 U.S.C. §103 based on *Lu* (US 6,480,911)? Applicant requests withdrawal of this rejection by the Appeal Brief Panel and allowance of the pending claims.

The Examiner admits that *Lu* fails to teach “wherein a discard policy is enabled for the third queue based on the loading of the capacity of the second queue” (page 3, Office Action of Aug. 29, 2006) and “controlling the adjustable rate by a loading of the capacity of the second queue and dropping the packets from the third/low class queue based on loading capacity of the second/medium class queue” (page 5, Office Action of Aug. 2, 2006). The Examiner appears, at first, to resort to Official notice for these features, but later explains in the advisory Action that the Official notice applies only to the prior existence of a switch matrix,

The Examiner’s rationale for the obviousness rejection is based on impermissible hindsight.

The mere knowledge of a switch matrix does not explain how one can perform the technical leap from acknowledging the existence of a switch matrix to the provision of, for example, “a queue shaper operable to set an adjustable rate in which the packets of information of the third queue are communicated to the scheduler, wherein a discard policy is enabled for the third queue based on the loading of the capacity of the second queue,” (claim 1) or “a discard policy is enabled for the third queue based on the loading of the capacity of the second queue,”

(claim 14) or “enabling a discard policy for the third queue based on the loading of the capacity of the second queue,”(claim 18) as claimed.

The Examiner argues (page 3 of the Advisory Action of September 27, 2007) that the claimed discard policy is obvious because “Lu teaches to drop lower class of packets to protect the packets of higher class, 10:37-40. So if the medium class queue is experiencing congestion, it is obvious to drop low class packets to direct the system resources to the medium class packets at the expense of the low class packets.” Further, the Examiner now relies on *KSR, Int’l Co. v. Teleflex, Inc.*, 550 U.S. \_\_\_, 127 S. Ct. 1727 (2007) (see page 2 of the Advisory Action of September 27, 2007) for the proposition that there is no longer a rigid application of the “teaching, suggestion, motivation” test (the so-called, “TSM” test).

While *KSR* may have eased the rigidity of the TSM test for obviousness, there must still be some cogent rationale for concluding that claimed subject matter is obvious, within the meaning of 35 U.S.C. §103. The Examiner has established no such cogent rationale. The Examiner merely alleges that he “**believes** that discarding packets of the third/low class queue based on the loading of the second/medium class queue is obvious to one of ordinary skill in the art” (page 2 of the Advisory Action of September 27, 2007) because *Lu* teaches dropping of lower classes of packets to protect packets of a higher class, somehow suggesting that if the medium class queue is experiencing congestion, it would have been obvious to drop low class packets to direct the system resources to the medium class packets at the expense of the low class packets. The Examiner’s **belief** is not a proper basis on which to conclude obviousness.

The Examiner points to col. 10, lines 30-40, of *Lu*, and this portion of the reference does relate to adjusting weight of throughput of queues and favoring of higher class subscribers. It also recites, “...during congestion, data packet **dropping** may begin with the low class when the

total network capacity is exceeded” such that high class communications quality is protected. If the Examiner is reading *Lu* as dropping low class packets based on the loading, i.e., congestion, in a queue of medium class packets, this is not an accurate reading of *Lu*. *Lu* teaches the dropping of lower class communications in favor of higher class communications **when the total network capacity is exceeded** (see col. 10, lines 37-40). So while one may arguably assert that *Lu* drops, or discards, packets of a third queue, say, in favor of packets in a higher class, say, second queue, **based on total network capacity**, this discarding of third queue packets in favor of second queue packets is **not** based, as claimed, **“on the loading of the capacity of the second queue.”** That is, *Lu*’s discard policy is based on total network capacity being exceeded, but the discarding of data in one queue in *Lu* is **not** based on the loading of capacity of **another queue**, as required by each and every one of the present claims.

There is simply no teaching or suggestion in *Lu* of enabling a discard policy for one or more queues wherein that discard policy is based on the loading of the capacity of one of the other queues, as disclosed and claimed in the present application.

The Examiner’s conclusion of obviousness is simply unsupported on the record. Again, the claimed subject matter includes three queues, a scheduler and a queue shaper for setting an adjustable rate at which packets of information of the third queue are communication to the scheduler, and wherein **“a discard policy is enabled for the third queue based on the loading of the capacity of the second queue.”** There is simply no teaching of such a **discard policy** in *Lu* because *Lu* teaches nothing about discarding data in one queue **based on the loading of capacity of another queue**, as required by all of the present claims.

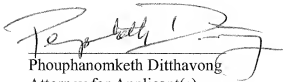
**III. CONCLUSION**

For the foregoing reasons, the Appeal Brief Panel is respectfully requested to withdraw the rejection of the present application in light of these clear errors and allow the pending claims.

Respectfully Submitted,

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11/19/07  
Date

  
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